

What is claimed is:

1. A method for annealing a semiconductor structure, the method comprising,

subjecting the semiconductor structure to an oscillating magnetic field, and,

applying a low temperature rapid thermal annealing (LTRTA) process to the semiconductor structure.

2. A method according to claim 1, wherein subjecting includes subjecting to a time-varying electromagnetic field.

3. A method according to claim 1, wherein subjecting includes providing a frequency in the microwave frequency band.

4. A method according to claim 1, wherein subjecting includes providing a frequency in the radio frequency (RF) band.

5. A method according to claim 1, wherein applying a LTRTA includes exposing the semiconductor to a temperature less than approximately 800 degrees Celsius.

6. A method according to claim 1, wherein applying a LTRTA includes exposing the semiconductor to a furnace having a

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temperature greater than approximately 500 degrees Celsius, and less than approximately 800 degrees Celsius.

7. A method according to claim 1, wherein applying a LTRTA can precede subjecting the semiconductor to an electromagnetic field.

8. A method according to claim 1, wherein applying a LTRTA includes using a furnace to perform the LTRTA.

9. A method for implanting a dopant in a semiconductor structure, the method comprising,
using ion implantation to implant the dopant in the semiconductor,
activating the dopant using electromagnetic induction heating (EMIH), and,
applying a low-temperature rapid thermal anneal (RTA) process.

10. A method according to claim 9, wherein the dopant is at least one of an n-type dopant and a p-type dopant.

11. A method according to claim 9, wherein activating the dopant using EMIH includes subjecting the dopant to an oscillating magnetic field.

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12. A method according to claim 9, wherein activating the dopant includes subjecting the dopant to a time-varying electromagnetic field.

13. A method according to claim 9, wherein activating the dopant includes providing at least one of a Radio Frequency (RF) wave and a microwave frequency.

14. A method according to claim 9, wherein applying a LTRTA includes exposing the semiconductor to a temperature less than approximately 800 degrees Celsius.

15. A method according to claim 9, wherein applying a LTRTA includes exposing the semiconductor to a furnace having a temperature greater than approximately 500 degrees Celsius, and less than approximately 800 degrees Celsius.

16. A method according to claim 9, wherein applying a LTRTA can precede activating the dopant.

17. A method according to claim 9, wherein applying a LTRTA includes using a furnace to perform the LTRTA.